IN THE CLAIMS:

Please amend the claims as follows:

1-7. (Cancelled)

8. (Currently Amended) A method, as in claim ~~7~~ 9, further comprising the step of evaluating the re-parameterized surface at one or more parameter positions.

9. (Currently Amended) ~~A method, as in claim 7~~ A method for surface re-parameterization of a surface around extraordinary vertices of a computer three-dimensional Catmull-Clark model with a plurality of vertices, at least one extraordinary vertex, and iso-parameter lines with a natural spacing, the method comprising the step of:

re-parameterizing one or more subdivision surfaces of the Catmull-Clark model around one or more of the extraordinary vertices into a re-parameterized surface with a new spacing that is different than the natural spacing as the iso-parameter lines approach the extraordinary vertex; and

at least one of storing the iso-parameter lines with the new spacing and displaying the iso-parameter lines with the new spacing,

where the re-parameterizing comprises the following steps:

computing four subdominant eigenvalues corresponding to each of the vertices of a face, being face vertices, of a quadrilateral mesh containing one or more points being evaluated;

re-parameterizing the surface around each of the face vertices using a re-parameterization of vanishing derivatives, such that

$x \xrightarrow{Fk} |x|^{\alpha_k - 1} x$, where k identifies the face vertex and x is the point being evaluated in a parameter domain, and the re-parameterization is subject to the constraint

$$\alpha_k \rangle - \frac{\log 2}{\log \lambda_k}$$

where λ_k is the subdominant eigenvalue corresponding to face vertex k and α_k is an exponent parameter of the re-parameterization for the respective face vertex; and blending the

re-parameterizations of each face vertex that is re-parameterized.

10. (Currently Amended) A method, as in claim ~~7~~ 9, where the re-parameterizing comprises the following steps:

computing a characteristic map corresponding to each of the vertices of a face, being face vertices, of a quadrilateral mesh containing one or more points being evaluated;

computing an inverse characteristic map for each of the face vertices; and

blending the inverse characteristic maps of the four face vertices to create the re-parameterization.

11. (Original) A method, as in claim 10, where the characteristic map is used to obtain a continuously differentiable parameterization around one or more of the extraordinary vertices.

12. (Previously Presented) A method, as in claim 10, where the inverse characteristic map is computed by locating a layer on the surface and a polynomial patch within that layer that contains the point to be evaluated and then computing a re-parameterized position of the input point by polynomial patch inversion.

13. (Currently Amended) A method, as in claim ~~7~~ 9, where the blending is a blending of the re-parameterizations of two or more extraordinary vertices.

14. (Currently Amended) A method, as in claim ~~7~~ 9, where the new spacing decreases as the iso-parameter lines approach one or more of the extraordinary vertices.

15. (Currently Amended) A method, as in claim ~~7~~ 9, where the new spacing is uniform as the iso-parameter lines approach one or more of the extraordinary vertices.

16-17. (Cancelled)